

CLAIMS

1. The use of a molecule chosen from:
 - 5 - the MMP-2 metalloprotease;
 - a fragment of said metalloprotease comprising a T epitope presented by MHC I;
 - 10 - a polynucleotide encoding said metalloprotease or encoding said fragment;

for obtaining a medicinal product for use in antitumor immunotherapy.
- 15 2. An immunogenic peptide constituting a T epitope presented by MHC I, characterized in that it consists of a fragment of 8 to 11 consecutive amino acids of the MMP-2 metalloprotease.
- 20 3. The immunogenic peptide as claimed in claim 2, characterized in that it is defined by the sequence GLPPDVQRV.
- 25 4. A polynucleotide encoding a peptide as claimed in either one of claims 2 and 3.
5. A composition comprising at least one peptide as claimed in either one of claims 2 and 3, or a
30 polynucleotide as claimed in claim 4.
6. The use of a peptide as claimed in either one of claims 2 and 3, or of a polynucleotide as claimed in claim 4, for obtaining a medicinal product.
- 35 7. The use as claimed in claim 6, characterized in that said medicinal product is for use in the treatment of melanomas.

8. An isolated antigen-presenting cell expressing an MHC I molecule, characterized in that it is loaded, *in vitro*, with a peptide as claimed in either one of claims 2 and 3.
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9. An antigen-presenting cell expressing an MHC I molecule, characterized in that it is transfected with a polynucleotide comprising a sequence encoding an immunogenic peptide as claimed in either one of claims 2 and 3.
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10. The use of the MMP-2 metalloprotease, or of a fragment thereof, for detecting cytotoxic T lymphocytes directed against MMP-2 in a biological sample obtained from an individual suffering from melanoma.
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11. A method of preparing cytotoxic T lymphocytes directed against the MMP-2 metalloprotease, characterized in that it comprises the selection, from cytotoxic T lymphocytes taken from a patient suffering from melanoma, of those that recognize the MMP-2 protein, or a fragment thereof, and the multiplication, *in vitro*, of the T lymphocytes thus selected.
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12. A preparation of cytotoxic T lymphocytes directed against the MMP-2 metalloprotease, which preparation can be obtained by means of the method as claimed in claim 11.
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13. A medicinal product, comprising an active ingredient chosen from:
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 - an immunogenic peptide as claimed in either one of claims 2 and 3;

- a polynucleotide as claimed in claim 4;
- an antigen-presenting cell as claimed in either one of claims 8 and 9;
- a preparation of cytotoxic T lymphocytes as claimed in claim 12.